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IDEA-0103-69
Copy 10 of 10

10 January 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Problem with Air Compressor for IRIS II

25X1A 1. [redacted] Itek Project Manager for IRIS II, called the undersigned this morning to inform him of problems relating to the air compressor which furnishes air to the air bars of IRIS II, and to explain why their personnel 25X1A recommended to [redacted] officials on 10 January 1969 the IRIS II should not fly with air compressor until problem is resolved.

2. Essentially, the problem is this: Air compressor is supposed to deliver 30 psi of air to the reduction valve which reduces this pressure to 4½ psi for the air bars. The air compressor in question and furnished by LAC delivers 60 to 70 psi at ground level up to the reduction valve. LAC informed Itek the reason for this is that the compressor operates at 50% to 60% efficiency at cruise altitude.

3. Itek concern relating to flying the IRIS II with the compressor is as follows:

A. The air lines to the reduction valve cannot handle 60 psi to 70 psi of air. There is a danger of rupturing the lines. More important, the reducing valve can only handle 30 psi and not the higher rates; consequently, there is great probability the valve will rupture and will require a replacement. THE REDUCING VALVE IS A LONG LEAD ITEM. It took over 4½ months to get the reduction valves for IRIS II SN-001 and SN-002. The third valve is not slated for delivery until February and one valve per month after that. If we would have to replace SN-001 valve with reducing valve slated for SN-002, this configuration could not be delivered 25X1A to [redacted] for testing until sometime in February. All other IRIS II deliveries would also slip.

NOTE: IRIS II operation requires air flowing through air bars while on the ground, during climbout to altitude and on let down.

[redacted]
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B. Itek has not been furnished an air compressor so they could check it out back at their home plant so that could determine if the piston driven compressor (Itek desired a centrifugal compressor) would impart vibrations or other degrading elements to their configuration or if it would be compatible to their plumbing and valve. Today was their first indication.

4. If the compressor in fact has the characteristics cited in paragraph 2 and cannot be changed, then there will be no alternative but to set up a SOP whereby a switching arrangement is set up to operate off the air compressor at operational altitude and at all other times; i.e., ground operations, climbout and let down, gas from the bottles would be utilized. This arrangement would, of course, put additional requirements on the pilot.

25X1A 5. The immediate concern of Itek, and SSD/R&D concurs, is that [redacted] will fly the mission slated for today with the air compressor on during conditions other than cruise altitude and damage the air lines and/or reduction valve. This, as pointed out earlier in this memo, would damage SN-001 and delay delivery of SN-002.

6. It is imperative that steps be taken to assure the air compressor furnished is compatible with the IRIS II before it is utilized in any flight tests with this configuration.

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[redacted]
SSD/R&D/OSA

25X1A SSD/R&D/OSA/[redacted]:bjg
Distribution:
Cy 1 - D/O/OSA
2 - SAS/O/OSA
3 - IDEA/O/OSA
4 - D/M/OSA
5 - DD/SA
6 - D/R&D/OSA
7 - SSD/R&D/OSA
8 - SSD/R&D Chrono
9 - PRD/M/OSA
10 - RB/OSA